

## CLAIMS

What is claimed is:

1. A method for determining the presence of thyroid-stimulating autoantibodies in a test sample, comprising:
  - a) providing:
    - i) a test sample suspected of containing thyroid-stimulating autoantibodies,
    - ii) cultured cells contained within a testing means, and
    - iii) polyethylene glycol;
  - b) exposing said test sample to said cultured cells and said polyethylene glycol under conditions such that said thyroid-stimulating antibodies are detectable; and
  - c) observing for the presence of detectable thyroid-stimulating antibodies.
2. The method of Claim 1, wherein said cultured cells are selected from the group consisting of FRTL-5 cells, CHO-R cells, and CHOLuc cells.
3. The method of Claim 1, wherein said observing is conducted using a luminometer.
4. The method of Claim 1, wherein said observing is conducted using cyclic adenosine monophosphate measurements.
5. The method of Claim 1, further comprising a Growth Medium.
6. The method of Claim 1, further comprising a Stimulation Medium.



7. The method of Claim 5, wherein said cultured cells are exposed to said Growth Medium prior to exposure of said test sample.

8. The method of Claim 6, wherein said cultured cells are exposed to said Stimulation Medium after exposure to said test sample.

9. The method of Claim 7, wherein said Stimulation Medium comprises said polyethylene glycol.

10. A method for determining the presence of thyroid-stimulating autoantibodies in a test sample, comprising:

a) providing:

i) a test sample suspected of containing thyroid-stimulating autoantibodies,

ii) cultured cells selected from the group consisting of FRTL-5 cells, CHO-R cells, and CHOLuc cells contained within a testing means, and

iii) polyethylene glycol;

b) exposing said test sample to said cultured cells and said polyethylene glycol under conditions such that said thyroid-stimulating antibodies are detectable; and

c) observing for the presence of detectable thyroid-stimulating antibodies, wherein said observing utilizes a luminometer.

11. The method of Claim 10, further comprising a Growth Medium.

12. The method of Claim 10, further comprising a Stimulation Medium.

13. The method of Claim 11, wherein said cultured cells are exposed to said Growth Medium prior to exposure of said test sample.



14. The method of Claim 12, wherein said cultured cells are exposed to said Stimulation Medium after exposure to said test sample.

15. The method of Claim 10, wherein said Stimulation Medium comprises said polyethylene glycol.

16. A method for determining the presence of thyroid-stimulating autoantibodies in a test sample, comprising:

a) providing:

i) a test sample suspected of containing thyroid-stimulating autoantibodies,

ii) cultured cells selected from the group consisting of FRTL-5 cells, CHO-R cells, and CHOLuc cells contained within a testing means,

iii) Growth Medium, and

iv) Stimulation Medium, wherein said Stimulation Medium comprises polyethylene glycol;

b) exposing said cultured said to said Growth Medium to produce grown cells;

c) exposing said test sample to said grown cells and said Stimulation Medium under conditions such that said thyroid-stimulating antibodies are detectable; and

c) observing for the presence of detectable thyroid-stimulating antibodies, wherein said observing utilizes a luminometer.

17. The method of Claim 16, wherein said cells are CHOLuc cells.

18. The method of Claim 17, wherein said observing further comprises measuring the cyclic adenosine monophosphate concentration.